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## PUBLIC HEALTH AND SANITATION

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Commissioner of the Department of Health

**A**N examination of the structure and functions of the department of health discloses one of the most remarkable of existing governmental agencies. Whatever may be the shortcomings of the department in practise, in theory at least it is equipped with ample power and with adequate machinery for the accomplishment of the duty, assigned to it by law, of promoting the health of the city.

Legally, the department springs from certain sections of the city charter; this may be said to be its lineal descent. Collaterally, the department is related to the police power of the state. But for whatever the department does there must be a scientific as well as a legal basis. For its right of way the department is indebted to the police power; for the construction of the road upon which it advances toward its goal, it looks to medical science, and it is fortunate in being authorized to contribute to medical science by its own researches.

To promote the health of the city, the board of health is empowered to conduct laboratory, field, and statistical investigations, to enforce all state laws that have relation to health, to create a municipal sanitary code, to enforce the sanitary code by suitable penalties, to issue orders for the abatement of nuisances or of conditions inimical to life and health, and to enforce such orders by its own agents. All of these vast powers and their attendant responsibilities rest upon three officials who, under the law, constitute the board of health, namely, the commissioner of health, the commissioner of police, and the health officer of the port of New York.

Since it is manifestly impossible, within the space allotted to this paper, either to trace the history of the department of health or to describe completely its manifold activities, the present statement will be limited to a summary of the progress made by the department during the past year. The presentation of such a

summary seems especially appropriate, since one of the objects of these conferences is to reveal the government of the city of New York in actual operation. Before proceeding to discuss the department's progress, it may be worth while to present a few figures showing the extent of its financial operations and the magnitude of its personal organization, and to state at somewhat greater length its duties under the charter.

On January 1st, 1914, there were connected with the department in an official capacity 3,428 persons; of this number, 79, all physicians, gave gratuitous service in hospitals or clinics. The corresponding figures for January 1st, 1915, are: Total number of persons employed in the department, 3,421, of whom 95 are unpaid.

The total sum appropriated for the current expenses of the department of health for the year 1914 was \$3,534,240.50. Of this sum \$3,363,767.85 was expended by the department, leaving a balance of \$170,472.65, largely the result of careful economies in administration. The sum of \$17,178.50 was transferred to other departments to cover deficiencies. There remained at the end of the year an unexpended balance of \$153,294.15.

The following extracts from the Greater New York charter show the extent of the responsibility with which the board of health is charged by law:

It shall be the duty of the board of health to aid in the enforcement of, and, so far as practicable, to enforce all laws of this state, applicable in said district (*i. e.*, the city and the waters adjacent thereto), to the preservation of human life, or to the care, promotion, or protection of health; and said board may exercise the authority given by said laws to enable it to discharge the duty hereby imposed; this section is intended to include all laws relative to cleanliness, and to the use or sale of poisonous, unwholesome, deleterious, or adulterated drugs, medicines or food, and the necessary sanitary supervision of the purity and wholesomeness of the water supply for the city of New York.

The board is authorized to require reports and information relative to the safety of life and promotion of health, from all public dispensaries, hospitals, asylums, infirmaries, prisons and schools, and from all other public institutions, and from the managers and occupants of all theaters and other places of public resort or amusement.

The board shall use all reasonable means for ascertaining the exist-

ence and cause of disease or peril to life or health, and for averting the same.

It shall be the duty of said board to gather and preserve such information and facts, relating to death, disease and health, from other parts of this state, but especially in said city, as may be useful in the discharge of its duties, and contribute to the promotion of health, or the security of life in the state of New York.

The sanitary code, which shall be in force in the city of New York the first day of January, nineteen hundred and two, to be binding and in force, is hereby declared and shall continue to be so binding and in force, except as the same may, from time to time, be revised, altered, amended or annulled.

The board of health is hereby authorized and empowered, from time to time, to add to and to alter, amend or annul any part of the said sanitary code, and may therein publish additional provisions for the security of life and health in the city of New York, and confer additional powers on the department of health, not inconsistent with the constitution or laws of this state, and may provide for the enforcement of the said sanitary code by such fines, penalties, forfeitures, or imprisonment as may by ordinance be prescribed.

The board of health may embrace in said sanitary code all matters and subjects to which, and so far as, the power and authority of said department of health extends, not limiting their application to the subject of health only.

The number of deaths reported during the year 1914 was 74,803, making a rate of 13.40 per 1,000 of the population. This is the lowest death rate ever recorded in the city of New York. If we compare this with the previous year's record, namely, 73,902 deaths and a rate of 13.76 for the year 1913, we find that there has been a decrease in the death rate of .36 of a point. How much this means to the community may perhaps be better appreciated by saying that if the death rate of 1913 had prevailed during the past year, there would have been 2,010 more deaths than actually occurred.

The most noteworthy feature of the decreased mortality was the record-breaking low infant death rate, 94.6 per 1,000 children born. This is the lowest infant death rate ever attained in the city of New York, and the lowest of any large city in this country. The infant death rate in 1913 was 102, which was the lowest

rate in the city up to that year, so that the decrease this year in the rate over last year is a little over 6 per cent.

From the standpoint of general organization and departmental efficiency, the most important general order issued during the year was one requiring full-time service on the part of bureau chiefs and other important department officials. This order reads as follows:

Directors of bureaus who are in receipt of salaries of \$5,000 or more per annum, and assistant directors of bureaus, assistant sanitary superintendents, chiefs of divisions and all other medical officers who are in receipt of salaries of \$3,000 or more per annum, are hereby declared to be full-time officers of the department and, as such, are required to give their services to the department during the full working day.

They shall not be allowed to engage in the general practise of medicine, or in any other regular occupation or business. With the approval of the commissioner, they may be permitted to engage in public health work outside of the department, but the department retains the right to determine whether such outside work interferes with, or is prejudicial to, the proper performance of departmental duty, and, after due notice, may withdraw such permission at any time.

Public health administration thus becomes a career—though, it must be acknowledged, not a particularly remunerative one—for a limited number of qualified men in the city of New York.

The sanitary code was completely rewritten during the latter part of 1914. In its new form it is definitely correlated with the ordinances of the board of aldermen, and is known as chapter 20 of the code of ordinances of the city of New York. It is divided into eighteen articles which bear the following titles:

Definitions	Midwifery and care of children
Animals	Miscellaneous provisions
Births, marriages and deaths	Offensive materials
Buildings	Plumbing, drainage, ventilation and sewage
Cold storage	Railroads
Coroners	Street conditions
Diseases	Trades, occupations and businesses
Drugs and medicines	Vessels and seamen
Food and drink	
General provisions	

Among new sections of the code, the most important, from the standpoint of public health, are the following:

1. Requiring the naming of ingredients of "patent" medicines on the labels of the packages, or, in lieu thereof, the registration of the ingredients with the department of health.

2. Requiring employers to use reasonably effective devices, means and methods to prevent the contraction by employees of illness or disease incident to the work or process in which such employees are engaged.

3. Providing for the sanitation, ventilation and lighting of theaters and other places of assembly, and of all places where people are employed.

4. Requiring owners of stables to obtain permits from the board of health, and to conduct their establishments in accordance with prescribed regulations.

5. Regulating the cold storage of food.

6. Requiring physicians, when reporting infectious diseases, to specify whether the individual affected has been engaged in handling food products.

7. Requiring institutions and private physicians to report cases of venereal diseases.

8. Requiring superintendents of hospitals and private practitioners to report occupational diseases and injuries.

9. Requiring physicians and superintendents of hospitals to report groups of cases of suspected food poisoning.

10. Providing, in the interest of school children, for the supervision, and in case of necessity only, for the exclusion from school of teachers suffering from pulmonary tuberculosis in a communicable form.

11. Prohibiting persons who are suffering from communicable diseases from working in their homes upon articles intended for general consumption.

12. Prohibiting the distribution of free samples of proprietary medicines or other substances of an alleged medicinal or curative character intended for internal human use.

13. Regulating the free distribution of vaccine, antitoxin, serum and cultures, and providing a penalty for physicians who

accept payment for vaccines and analogous products which have been obtained from the department gratuitously.

14. Providing that persons ill with communicable disease may not handle or sell food.

15. Providing for decent and clean conditions in food manufacturing, hotel and restaurant kitchens and retail food stores.

16. Providing for the physical examination of children at the time of entering public school by private physicians or by medical inspectors of the department of health. (This section corresponds in substance with a statute which applies to all parts of the state except the city of New York.)

17. Providing for the control by permit of all private hospitals other than those which are specifically authorized by law.

18. Requiring the lessees or owners of marsh lands and sunken lots to fill in or drain the same or to employ such other methods as will prevent the breeding of mosquitoes.

19. Providing for the sanitation of passenger cars and omnibuses.

20. Regulating public laundries.

21. Prohibiting offensive and dangerous practises in the manufacture of cigars and cigarettes.

22. Requiring the removal of harmful dust, gases and other impurities from work rooms by suction devices.

23. Prohibiting the sale of bichloride of mercury except upon a physician's prescription.

24. Prohibiting unmuzzled dogs in streets and other public places.

25. Prohibiting the use of wood alcohol in preparations intended for human use.

26. Prohibiting the sale of opium, morphine, and other habit-forming drugs except on the written prescription of a physician.

27. Requiring the manufacturers and importers of artificial or natural spring water to file with the department certain information concerning the character and composition of the water.

28. Prescribing the duties of physicians, hospitals, dispensaries, and other institutions with respect to reportable diseases.

29. Prohibiting the common use of forks at free lunch counters.

Among the important regulations promulgated by the department during 1914 are the following:

1. Regulations providing for sanitary conditions in floating baths, stationary pools, and bathing beaches.
2. Regulations governing sanitary conditions of tents, camps and bungalows.
3. Regulations regarding the use of coffin seals in cases of death from infectious diseases.
4. Regulations regarding the sale of milk and cream, including sections relating to bacterial content.
5. Regulations safeguarding the health of children cared for in day nurseries.
6. Regulations governing the handling, storing and sale of food in stores, factories, hotels, restaurants, *etc.*

There was established in 1914 a bureau known as the bureau of public health education. The working staff of this bureau was recruited within the department by the transfer of workers of special talent as writers, compilers and lecturers, from existing branches of the service. Its creation, therefore, committed the city to no new expense. The functions of the bureau of public health education as thus far developed include: the preparation and issuance of press bulletins, of a weekly bulletin sent to all physicians, school principals, clergymen and city officials, of a monthly bulletin containing special articles on public health subjects, staff news for the information of employes of the department of health, the *Otisville Ray* for the information of the patients at the municipal sanatorium, reprints and monographs descriptive of the departmental activities, circulars of information and placards; organization of educational lectures on health topics for employes of the department of health and for high schools, colleges, clubs, civic organizations and labor unions; preparation and display of exhibits dealing with the work of the department; the showing of exhibits in schools, settlement houses, clinics and vacant stores; preparation and exhibition of films devoted to public health topics; the holding of free moving-picture exhibitions in parks, recreation centers and play grounds; co-operation with other city departments and organizations interested in public health work and providing these with material suitable for educating the public in health matters.

With the co-operation of the honorary medical staff of Willard  
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Parker Hospital and of the bureau of laboratories, systematic instruction in the diagnosis and treatment of contagious diseases is now offered by the department to medical graduates. For the first series of lectures and demonstrations, more than sixty physicians were enrolled.

In order to safeguard and improve the health of the employes of the department, the department has undertaken to make a thorough physical examination of all its employes. Originally regarded with suspicion, these examinations are now eagerly sought by all classes of employes. During the year 1,237 persons, 437 men and 800 women, were examined. The results have been invaluable; cases of unsuspected disease have been discovered, and treatment and preventive measures have been inaugurated. Cases of absence on account of illness are investigated, emergency treatment to employes taken ill while on duty is administered and constant supervision is exercised over the health of the employes. The adoption of the plan in all municipal departments is urged.

An important new educational activity is the work which the department has begun in relation to industrial hygiene. Education in matters of industrial hygiene has hitherto been left entirely to private effort. From time to time, legislation to promote occupational hygiene has been prompted by private societies. This year the department of health of the city of New York, for the first time in its history, has claimed this field for its own. The method proposed, however, is wholly that of education. No increase in the department's force of inspectors is contemplated.

Wherever the rate of sickness is unduly high because of insanitary conditions of employment, there the department is ready to enter. In the first instance, it asks for the support of the individuals affected by existing sanitary conditions, making its appeal to both employes and employers. In a bulletin addressed to numerous trade unions, the department has announced its readiness "to undertake a sanitary survey of any industry, trade or group of manufacturing establishments in the city, with a view to appraising existing conditions, and in order to show to employes and employers alike what can be accomplished through a system of voluntary hygienic and sanitary control," Responses

have been received from a number of trades and plans are now afoot which will result in the formulation of sanitary industrial standards and in measures for the prevention of industrial diseases. This work has been entrusted to a new division organized within the bureau of preventable diseases, which bears the title of the division of industrial hygiene.

The department advocates the development of a system of periodic medical inspection of workers in large establishments, similar to the system of medical inspection of school children, which is now universally recognized as an indispensable part of an effective public health program. Employers and workers are urged to co-operate with the department in the establishment of medical inspection systems in industries in which such inspection is especially important from the standpoint of communicable disease.

The bureau of food inspection has undertaken a systematic inspection of all classes of establishments in this city (except those under federal or state inspection) where food is manufactured, prepared or sold. The effectiveness of the work of the bureau has been increased by the adoption of a plan for the district assignment of inspectors; duplication and overlapping have thus been avoided.

The protection of the city through the pasteurization of the bulk of its milk supply is now an accomplished fact. No raw milk is allowed to be sold except that which is obtained from tuberculin-tested cows.

Prior to 1914 the department systematically avoided the inspection of dairy farms which were conducted under the auspices of the milk commissions of the various county medical societies. After due consideration it was decided that, in view of the fact that the department is responsible to the city for the safety of the entire milk supply, the dairy farms of the milk commissions were logically subject to the system of examination and inspection which is carried on by the department elsewhere. It was ordered that these dairies should be inspected and their products examined periodically, that careful records should be kept, and that suitable permits should be issued. This action has met with the approval of the milk commissions, whose voluntary

activities have not been diminished, and which continue to "certify" milk which conforms to their own high standard.

In view of the many new activities of the bureau of food inspection, and in order to insure uniformity of action by the various inspectors of the bureau, arrangements have been made for bi-weekly conferences of inspectors, at which the rules and regulations of the department and their interpretation and application are discussed.

Early in the year an advisory council was organized, consisting of representatives of the various trades that regularly come under the supervision of the department, and including in its membership as well persons identified in some way with public health administration, and those connected with institutions and private societies whose objects are akin to those of the department of health.

The advisory council is divided into committees corresponding to the several bureaus of the department. It has rendered valuable assistance to the department throughout the year in the critical study of established procedures and in the consideration of proposed new measures. Its most important services were performed in connection with the revision of the sanitary code.

The circulation of the *Weekly Bulletin* of the department has been increased from two thousand to fifteen thousand copies, making it possible to send it regularly to every practising physician in the city of New York, to principals of public and parochial schools, and to all institutions with which the department has official relations. The physicians and institutions have responded by a more willing co-operation due, as one of them wrote, to their better understanding of "what the department is doing and why it is doing it."

The department is about to issue the first number of a new publication, *School Health News*, which will be sent monthly during the school term to every public school teacher in the city, and in the preparation of which the bureau of public health education, the bureau of child hygiene, and the division of physical training of the department of education will collaborate.

An active campaign has been carried on against physicians and midwives for failure to file certificates of birth. A special investi-

gation in the entire city and covering several thousand babies selected at random showed that over 98% of all births had been reported according to law.

A central delinquent list has been established of physicians who have failed to comply with regulations of the department of health. The department regrets the necessity for this list, and hopes to see it reduced to a minimum this year and ultimately abolished.

In addition to the fifty-six infants' milk stations maintained by the department of health throughout the year, private philanthropists donated the rent and equipment of seven stations, for which the bureau of child hygiene provided doctors and nurses. Of these seven stations, one is in The Bronx, one in Brooklyn, and five in the hitherto neglected borough of Queens. Two new department stations have been authorized, making a total of fifty-eight to be hereafter maintained by the city.

It is gratifying to report that there was a marked increase in the proportion of breast-fed babies in attendance at the milk stations, namely, 63% in 1914 as compared with 55% in 1913.

The experimental prenatal work carried on by the bureau of child hygiene reached 500 mothers, among whom there were no maternal deaths. 96% of the babies born are still living. The deaths under one month per thousand births were 16, as compared with 37 for the city as a whole.

The school registration in the elementary, public, parochial and high schools of the city has reached 912,583. To look after the health of these children, there is an inspection staff under the direction of this department, in the proportion of one medical inspector for each 9,300 children, and one nurse for each 4,700 children. A sharp watch is kept on contagious diseases, and that this has been effective is demonstrated by the fact that during 1914 it was unnecessary to close any school building in the city on account of contagious diseases.

In order to increase the efficiency of the school work of the department without materially increasing the working force, two sets of experiments were started. In the first an effort is being made to secure the use of teachers as the first diagnostic line; in other words, the teachers have been instructed in the

methods of examination for minor and major contagious diseases as well as in the detection of gross physical defects of vision and hearing. Children who are selected for attention are referred immediately to the nurse or the school inspector, the latter making the diagnosis and suggesting the appropriate care.

The second experiment has for its object the wider use of private physicians, without expense to the city, in the work of physical examination.

In the sanitary bureau an effort has been made to replace sporadic inspections based upon citizens' complaints by systematic inspection work, which has for its object the abatement of nuisance by the initiative of the department itself. Accordingly a house and block survey of the entire city is now in progress. It is worthy of note that during 1914 18,863 complaints of nuisances were lodged by inspectors spontaneously, as against 32,571 made by citizens. A continuance of the present plan of action should result in a steady diminution in the number of complaints of a legitimate character made by citizens.

Nearly 6,000 inspections of lodging houses were made during the year, and these led to the issuance of 600 notices to abate nuisances. An effort was made to encourage cleanliness on the part of lodgers. At the municipal lodging house a daily bath is required. In other lodging houses, having 14,223 lodgers, it was found that only 2,000 baths were taken daily.

Vigorous efforts were made in theaters, department stores, public institutions, public lavatories and wash rooms to obtain compliance with the ordinance which forbids the use of common drinking cups and common towels.

The prevalence of glanders necessitated an order for the abolition of common horse troughs and the substitution of drinking fountains having a system of water supply which requires the use of individual pails. The board of aldermen co-operated in this work.

The increased pollution of river and harbor waters necessitated the suppression of some of the river baths as a measure of safety. To replace discontinued river baths, the municipality is urged to hasten the construction of additional interior baths and pools.

Periodic inspection of roof tanks was inaugurated by the

department in 1914. In consequence of the conditions revealed in the course of 4,000 inspections of these tanks, it became necessary to issue 3,000 orders requiring compliance with existing regulations.

Large areas of salt marsh and inland swamps in the greater city have been filled, drained or oiled. Wherever the ownership of property could be determined, suitable orders and notices to abate mosquito-breeding nuisances were issued.

Following the receipt of a letter of encouragement and approval from the mayor, the department of health, which had publicly declared that overcrowded street cars constituted a menace to health and should not be tolerated, proceeded to issue orders for the abatement of this nuisance. The department's novel campaign in this field followed the receipt of a letter from the mayor of the city, who wrote as follows:

It is plain that the accommodations which are offered to passengers on many of the transit lines in the city are not what they should be.

Section 1176 of the charter reads in part as follows: "Whenever any business pursuit shall, in the opinion of the board of health, be in a condition or in effect dangerous to life or health, said board may enter in its records the same as a nuisance, and order the same to be removed, abated, suspended or improved."

Cannot the department of health, acting in accordance with this provision of the charter, take steps to abate the nuisance of overcrowding? There should be better conditions on all of the lines during non-rush hours, and no company should be excused from the duty of using, at any time, as many cars as it may be safe and possible to operate up to the limit of the number required to safeguard the health of its passengers.

You have shown that overcrowding is a menace to health, and the courts will undoubtedly sustain you in a vigorous attempt to obtain relief from the present notorious and intolerable conditions which offend not only against health but against decency.

On the receipt of this communication, the activities of the board of health began. The succeeding events are here stated in chronological order.

The board of health declared overcrowded cars on the Eighty-sixth street line (New York Railways Company) and the Fifty-

ninth street line (Third Avenue Railroad Company), to be a public nuisance, and ordered that the carrying of passengers on these lines be "so regulated that the total number of passengers of any car, at any time, shall not exceed one and one-half times the seating capacity of the car."

The board of health ordered that overcrowding shall cease on the Graham avenue line of the Brooklyn Heights Railroad Company.

The Third Avenue Railroad Company agreed to supply additional cars on the Fifty-ninth street line, and to comply with the order of the board of health.

The board of health, after hearing counsel for the New York Railways Company and the Brooklyn Heights Railroad Company, reaffirmed its orders on those companies.

The board of health ordered the Staten Island Railway to cease overcrowding on its "Richmond Line."

The Brooklyn Heights Railroad Company, through its counsel, stated that the order of the board of health would be complied with, and that additional cars had been placed in service on Graham avenue.

Mr. Theodore P. Shonts, President of the New York Railways Company, wrote that the company would observe the order affecting the Eighty-sixth street line.

The board of health ordered overcrowding to cease on the Flatbush-Seventh avenue and the Third avenue surface lines in Brooklyn, owned respectively by the Nassau Electric Railway Company and the Brooklyn Heights Railway Company, and operated by the Brooklyn Rapid Transit Company.

The Nassau Electric Railway Company and the Brooklyn Heights Railway Company notified the board of health of their intention to comply with the orders which respectively affected them.

The board of health ordered that overcrowding cease on the Sixth and Eighth avenue surface lines in Manhattan. The New York Railways Company agreed to comply.

The Staten Island Company, which was ordered to cease overcrowding on one of its lines, promised voluntarily to adopt the health board standard for all of its lines.

The board of health ordered the cessation of overcrowding on the Lexington avenue surface line.

A series of convictions was obtained in the several boroughs for violation of the section of the sanitary code relating to smoke nuisance. One case against the New York, New Haven and Hartford Railroad resulted in a fine of \$500; in a second case against the same company sentence was suspended. In Brooklyn, out of 13 cases taken to court, 9 were fined; in 3 cases, sentence was suspended; and in 1 case, the offender was imprisoned in jail for three days. Like results were obtained in the other boroughs.

The department was fortunate enough to obtain the sustained co-operation of the police department in the enforcement of certain sections of the sanitary code. The police officers assist either by making arrests for obvious violations or by reporting such violations to this department; each patrolman on his regular "beat" acts as an auxiliary health officer. Valuable aid has thus been rendered.

The annual clean-up campaign was conducted in record-breaking time. It commenced at a conference held at the department of health on April 29. On May 1, \$15,000 was set aside for special clean-up purposes for the use of the department of street cleaning. The week of May 11 to 17 was devoted to an energetic campaign of publicity, and the actual removal of accumulated rubbish was accomplished from May 18 to May 23.

Altogether 1,750,000 circulars of information were distributed throughout the boroughs of Manhattan, The Bronx and Brooklyn. Official notices of the date of removal of rubbish, 1,500,000 in number, were distributed through the police department two days before the actual clean-up began.

A large bill-posting firm posted notices calling attention to clean-up week; these were placed on all the wagons of the street cleaning department. Eight hundred moving-picture theaters in the city displayed special slides supplied by the department of health, announcing "Clean-Up Week," and the newspapers rendered valuable assistance.

The following figures represent the excess loads of dirt and rubbish collected during clean-up week, as reported by the commissioner of the department of street cleaning:



	<i>Manhattan</i>	<i>The Bronx</i>	<i>Brooklyn</i>	<i>Total</i>
May 18.....	467	65	567	1,099
May 19.....	451	74	805	1,330
May 20.....	362	83	858	1,303
May 21.....	359	80	670	1,109
May 22.....	194	68	690	952
May 23.....	28	92½	301	421½
<hr/>				
Total.....	1,861	462½	3,891	6,214½

Early in the year the board of estimate and apportionment authorized the construction of the first unit of a new hospital for contagious diseases in the borough of Queens. The contract was promptly signed and the building is nearing completion. The site in use for this purpose was purchased by the city more than eleven years ago.

An important step forward was made when the board of estimate and apportionment and the board of aldermen sanctioned the purchase of the Seton Falls site in The Bronx, for the purpose of hospital development. There is available for the construction of this hospital the sum of \$125,000. Request has been made for a sufficient sum, in addition, to render possible the construction in the first instance of a group of three buildings, the completion of which will enable the department to discontinue the transfer of sick children to North Brother Island—a practise which has been much criticized.

The bulk of the hospital population at Riverside Hospital, North Brother Island, consists, at the present time, of adults affected with tuberculosis. There is under construction on the island a pavilion for the care of cases of venereal diseases. The plan of the department is to devote this island in the future wholly to the care of adults suffering from tuberculosis and venereal diseases.

During the year a system of follow-up work to ascertain the after effects of contagious diseases upon patients discharged from the hospitals of the department was inaugurated.

A special clinic for the intensive study of the cause and treatment of whooping cough has been established at the corner of

Avenue C and Sixteenth street, in the vicinity of the Willard Parker Hospital. In the conduct of this clinic the bureau of hospitals and the bureau of laboratories have collaborated. Early reports indicate that some progress has been made in the treatment of this disease.

A model form of medical organization, designed to meet the present and future needs of the department in its hospitals for contagious diseases, was adopted during the year. Daily attendance, by visiting physicians, in all the wards of the hospitals, is now the rule.

A society for clinical study has been organized in each of the hospitals of the department. Each member of the staff is expected to devote himself, during his spare hours, to the pursuit of some special topic or branch of medicine, and is granted leave of absence from the hospital during stated hours each week for the practical pursuit of the special subject assigned to him. A higher grade of medical service is expected to be the result of this post-graduate work.

With the object of affording stimulation to the nursing staffs of the hospitals, a committee has been formed to institute lectures, courses of study, forms of entertainment and tours of observation for the nurses employed in the several hospitals of the department.

The superintendent of hospitals now reports, month by month, the number of contagious disease infections occurring among the physicians, visiting physicians, resident physicians, nurses and other hospital employes of the department, presumably from contact with hospital cases. Based upon these reports, investigations have been made for the purpose of lessening the dangers of contact wherever possible.

The State Charities Aid Association was invited and accepted the invitation to make periodic inspections of the hospitals of the department. This work has been done by members of the association's New York city visiting committee.

A committee was appointed to prepare a general plan for the layout of the Otisville sanatorium, showing the grouping of future buildings, service roads, paths and other approaches, disposition of lawns, terraces, *etc.*, and the general location of plantations. The plan which has been adopted is sufficiently

flexible to permit of minor changes from time to time as new conditions arise, but is definite enough to serve as a practical guide in the location of future buildings.

At present the activities of the department are functionally classified and are controlled by bureau chiefs. The field workers of the department are directed from headquarters. To this system, advantageous as it is in many ways, there are three principal objections:

1. The director of a bureau is too far removed from those who do the field work of the bureau.

2. Where there is a high degree of differentiation of function, the individual worker ceases to see things in their true proportion, and fails to grasp or apply the broad principles by which the department is governed. Mental and professional development are inhibited by the repetition of detail work of a monotonous character.

3. Various bureaus send their representatives into the same districts, often into the same houses, which results in undue expenditure of time and energy and an annoyance to the individual citizen.

Can these disadvantages be overcome? How far can the work of the department be improved by the substitution of a system of local or district administration for the present purely functional administration? Can field workers be trained to perform, and can they actually perform in a satisfactory manner, a variety of functions?

In order to answer these questions intelligently, an experimental health district has been established, where all the activities of the department are locally directed by a single district chief, who represents all of the bureaus which are engaged in field work. That there is much promise in this experiment is shown by the preliminary reports. For example, during the last week of the year, seven agents of the department made 177 visits in 99 houses.

In 61 houses, 1 health function was served.

In 18 houses, 2 health functions were served.

In 8 houses, 3 health functions were served.

In 7 houses, 4 health functions were served.

In 1 house, 5 health functions were served.

In 4 houses, 6 health functions were served.

This study will be continued during the coming year, and with the co-operation of heads of other departments, may even be carried beyond the strict limits of our work, so as to include in its operation the local administration of all of the health and related activities of the municipality within the experimental district.

Investigation having shown that fumigation was being extensively practised by the department without sufficient evidence to warrant the practise, arrangements have been made to reduce the department's fumigation activities to a minimum. The present program is discussed fully in the report of the bureau of infectious diseases.

The number of cases of venereal disease reported in 1914 was approximately double that reported in the previous year; this shows an increased willingness on the part of institutions and physicians to co-operate with the department in its efforts to gather complete statistics of these diseases.

The handbook of the bureau of infectious diseases was entirely rewritten. This manual for employes serves also as a reference book for those who desire to make an intimate study of the functions of the bureau of infectious diseases.

Numerous monographs and circulars in regard to contagious diseases were issued during the year.

An investigation was made to determine whether patients entering the hospitals of the department could pay for the care which they receive. It was found that very few could do so.

New procedures for home supervision of cases of whooping cough reported by dispensaries and institutions were adopted in August.

A systematic investigation by field nurses is being made of all cases discharged from the state sanatorium at Raybrook and from the department of health sanatorium at Otisville, the object being to ascertain the final results of treatment, its social as well as its personal value.

The anti-rabic clinics of the department were reorganized and methods made uniform in all boroughs. A new clinic was opened at 29 Third avenue, Brooklyn.

Late in the year foot and mouth disease appeared in Long Island and all the cattle in a number of stables in the borough of Queens were destroyed by state inspectors. Two suspected cases of human foot and mouth disease were observed. A general order was issued for the pasteurization of all milk during the continuance of the epidemic.

The special fund from the bureau of social research which has hitherto been used for the support of diagnostic laboratory work in venereal diseases was exhausted at the end of 1914. Provision having been made in the budget for 1915, this work is now carried on as a municipal activity.

In co-operation with the bureau of licenses, a clinic for the examination of applicants for peddlers' licenses was established at 49 Lafayette street, where applicants undergo examinations for tuberculosis and other communicable diseases.

A special inspection of each general and special hospital, home for incurables, orphan asylum, dispensary and similar institution in the city, was undertaken for the purpose of ascertaining the manner in which these institutions are complying with the sanitary code, which requires that in every public hospital and dispensary in the city of New York there shall be provided and maintained a suitable room or rooms for the temporary isolation of persons suffering from infectious diseases. On the basis of this study, suitable regulations were adopted for the care of contagious diseases in all public and semi-public institutions in the city.

The department has discontinued the practise of transferring patients ill with contagious diseases from out-of-town institutions to the city, on the principle that such institutions, in justice to their inmates, should be provided with suitable facilities for the isolation of contagious diseases.

The state law makes compulsory the vaccination of children attending public schools. This law does not apply to the parochial schools, which are under the jurisdiction of the Catholic school board; the vaccination of the children attending parochial schools has hitherto been neglected. The great danger involved in this neglect was pointed out to the officials of the Catholic school board, who promptly and cordially offered to co-operate with the department. During the summer, therefore, 69,354

children attending the parochial schools in the five boroughs were vaccinated against smallpox.

Managers of lodging houses are now requested to notify this department of the removal of all persons ill with tuberculosis. Lodging-house cases furnish one of the most difficult problems in the tuberculosis work of the department. This new procedure will make it possible to keep them under closer observation.

An examination of attendants and student helpers engaged in the public school lunch service was made, with especial reference to tuberculosis, syphilis, diphtheria, typhoid and other infectious diseases.

From the surplus product of the laboratory, *tetanus antitoxin* sufficient to immunize 200,000 wounded men was sent abroad for distribution among nearly all of the armies engaged in the war. For all of this supply payment is to be made to the city at cost.

The amount of smallpox vaccine prepared and distributed during 1914 showed a large increase over that of previous years, due to the active campaign in favor of general vaccination, carried on by both the New York city and state departments of health.

The report on meningitis shows that 202 cases were treated during the year 1914 as against 131 during the previous year; 170 intraspinal injections of anti-meningitis serum were performed.

Pasteur anti-rabic treatment was given to 852 patients during 1914 as against 975 during the previous year. There were three human deaths from rabies during the year. During the last six months of the year, 42 persons who had been bitten by cats received Pasteur treatment. Of this number 33 patients were bitten by 12 cats that were proved to be rabid by a microscopical examination of their brains. This indicates clearly that stray cats, as well as stray dogs, should be captured and destroyed.

The laboratory work of the department has hitherto been under divided control. The research laboratories, so-called, were in charge of the director of laboratories, while the diagnostic laboratories were under the supervision of the director of the bureau of infectious diseases. At the close of the year the laboratories were consolidated, and the entire laboratory organization placed in charge of the director of laboratories. Certain economies will result from this consolidation.

At the request of the commissioner of health, critical studies of various phases of the technical work of the bureau of laboratories were undertaken independently by three different members of the advisory council. All pronounced the work performed to be of a very high quality. Some valuable suggestions were adopted.

Arrangements were made whereby the number of milk samples examined bacteriologically was more than doubled. This was accomplished without any increase in the force of the bacteriological laboratory.

For years part of the bacteriological work of the New York county milk commission was carried on in the laboratories of the department. The corporation counsel, who was consulted in regard to the legality of this arrangement, expressed the following opinion:

The provisions of the law do not require the city of New York to bear any part of the expenses connected with the activities of the milk commission, or, in strictness, warrant the arrangement whereby the milk commission makes use of the employes, supplies and apparatus of the department of health.

In view of this decision, an amicable arrangement with the milk commission was made for the withdrawal of its work from the laboratories of the department.

Through the assignment of a representative of the commissioners of accounts to this department, by request, several fruitful investigations were made, among which are the following:

(a) It was discovered that in a number of instances physicians had obtained laboratory products from the department ostensibly for use among the poor, but that such products had not been used for the purpose indicated. The department was advised that the evidence obtained would not warrant legal action. Twenty physicians, were, however, sharply warned.

Incidentally this investigation showed that diphtheria anti-toxin had been used in many cases which had not been reported to the department as cases of diphtheria. In future, systematic comparison will be made between antitoxin receipt stubs and the records of the bureau of infectious diseases, in order to insure

promptness and accuracy on the part of the medical profession in the reporting of diphtheria.

(b) A study was made of the telephone requirements in the various offices of the department in the boroughs of Manhattan and The Bronx. Some saving has resulted.

(c) It was discovered that condemned food supplies were being surreptitiously removed from the offal dock. The police department was asked to co-operate with this department in its efforts to prevent this practise.

(d) Comparative studies were made of the work performed by physicians, nurses, nurses' assistants and cleaners in a number of milk stations.

(e) The use of motor and horse-drawn vehicles in the department was studied and facts were ascertained which will be of assistance to the department.

(f) A report was made upon the work of the supervisor of buildings and grounds.

(g) A study was made of the work of all of the employees attached to The Bronx borough office. In one bureau a top-heavy organization was revealed; suitable changes followed.

At the request of the commissioner of health, a study of the accounting methods and care of valuable stock at the branch laboratory at Otisville was made by the office of the commissioners of accounts. Based upon this investigation were recommendations in relation to accounting methods which were adopted.

In view of the frequency of requests for the free distribution of laboratory products to municipalities and hospitals outside of the city of New York the department has adopted the policy of using "all its resources for the protection of the health of the city," at the same time declaring its willingness "to co-operate with other municipalities and states in special emergencies." It has been ordered also that "services performed for other communities shall be duly compensated."

The organization of a stenographic division at headquarters into which have been gathered the stenographers and typists, heretofore scattered throughout the various bureau offices, is one of the most notable of a series of measures inaugurated during the year to increase the efficiency of the department.



Many of the professional workers of the department have long been employed on a part-time basis. An official definition of part-time service, applicable throughout the department, was, however, lacking. Such a definition has now been promulgated.

During the year a careful study was made of the sanitary code, of the regulations of the department, and of all forms of board orders which prescribe or require any kind of alteration to buildings, with a view to establishing perfect consistency between the regulations of the board of health and those of other city and state departments. As a result of this study conflict of orders, confusion, and unnecessary expense to citizens will be avoided.

An order was issued forbidding employes of the department to enter into or to maintain business relations with, or to accept any fee for the performance of professional services for any milk or other firm whose activities are under the supervision of the department of health.

The chief of the division of research and efficiency in the bureau of child hygiene was detached from that bureau and assigned to the office of the commissioner, where his services will be utilized for the benefit of the department as a whole.

The high per capita cost of operating the department clinics for school children was materially reduced by arranging for surgical operations in these clinics every week day in place of every other day.

In every possible way efforts have been made to lighten the burdens of the department and incidentally of the taxpayers, by transferring to private physicians clinical and other functions which such physicians are able to perform without danger to the public health. A notable instance of the application of this new policy is acceptance on a child's admission to school of the certificate of a private physician in lieu of examination by the department's own medical inspectors.

Throughout the year studies of the various activities of the department were made, with a view to the more effective utilization of available means and forces. In consequence of these studies, a number of unproductive activities were discontinued. By means of office consolidation in the Richmond borough office,

several valuable employes, who, owing to the limited amount of work to be done in the Richmond borough office, were little more than supernumeraries there, were transferred to branches of the service where their help was badly needed. A similar study of the work of the Queens borough office has since been undertaken.

The departmental board of promotions, which previously consisted of three individuals, was reorganized early in the year, so as to include as members of the board all bureau chiefs.

A uniform method of dealing with requests for "leave of absence with pay" was inaugurated.

In order to show each chief of bureau precisely where his bureau stands in the matter of supplies, and whether in a given month goods have been consumed in excess of the available appropriations for any particular purpose, a form was inaugurated for monthly distribution showing the following facts:

1. Amount of annual appropriation for supplies (each appropriation item to be separately stated).
2. Amount of monthly appropriation calculated as one-twelfth of annual appropriation.
3. Amount of requisitions, item by item, during the month covered by the report.
4. Amount available for the period since the beginning of the fiscal year (on a pro-rata basis).
5. Amount actually used since the beginning of the fiscal year.

Inquiry having indicated that in some of the divisions of the department important instructions to groups of workers had been given orally, in so informal a manner that it would be impossible to prove conclusively when such instructions were issued, to whom issued and with what emphasis, heads of bureaus were instructed that all orders which are equivalent to rules and which affect groups of workers should invariably be reduced to writing and formally promulgated.

Statements have been completed showing the unit cost of functions and activities of the department; these figures will prove of value to the department. Departments of health in other cities will be urged to follow suit, and valuable and instructive comparative data will, it is hoped, thus be obtained.

Many inspectors and other field workers of the department

were without comprehensive printed codes of instructions. Inspectors were expected to carry in their minds many of the instructions given them. Each bureau chief was therefore directed to formulate a code of instructions applicable to the field workers of his particular bureau.

In order to meet the frequent requests from department employes for permission to attend conventions and conferences in this city and elsewhere in the department's time and at the expense of the department, a committee was appointed to prepare an official list of annual conventions and meetings representation at which is clearly desirable in the interest of the department.

### *Acknowledgments*

Many of the procedures of the department this year have been new. In all of the bureaus the pace has been quickened. A serious effort has been made to hold each employe of the department up to a high standard of personal achievement. Officers and employes have been asked to make sacrifices to which they have not been accustomed. In some instances salaries have been reduced: and except in a few cases, it has been impossible, owing to the financial stringency, to reward zealous and efficient workers according to their merit. Under these circumstances, eagerness to serve the department could not reasonably have been anticipated. Nevertheless, there has been manifested throughout the department a steadfast devotion to duty, and in many instances even a high degree of enthusiasm.

That the health department of the city of New York is permitted by the mayor to conduct its affairs wholly untrammelled by interests foreign to its fundamental purpose of conserving life and health, must serve as a lesson to every city where health administration fails because less favorable conditions prevail.

